Pollution: A Global Health Crisis

Geneva Health Forum
5 May 2022
The Global Alliance on Health and Pollution (GAHP)

Collaboration of 65+ leading institutions and governments to address pollution crisis:
- Governments of Azerbaijan, Argentina, Madagascar, Ghana, Senegal and 20 more…
- UN Development Program (UNDP), UN Environment Program (UNEP), European Commission, others, plus Universities and Civil Society

- Supported policy efforts for the UN Environmental Assembly to approve new Science Policy Panel to Tackle Pollution
- Responsible for inclusion of all forms of pollution in the SDG on Health
- Convened 2017 *The Lancet* Commission on Pollution + Health

**THE LANCET**
POLLUTION – A MAJOR UNDERRECOGNIZED GLOBAL ISSUE

- Household Pollution
- Ambient Air Pollution
- Water Pollution
- Soil Pollution
- Occupational
- Lead
The Lancet Commission on Pollution and Health

• Pollution is responsible for approximately 9 million deaths per year – one in six deaths worldwide

• Globally, the number of deaths attributable to pollution remain much greater than those of war and terrorism, malaria/HIV/TB, and drugs and alcohol, and are on a par with deaths from smoking

• Air pollution broadly (household and ambient) accounts for a total 6.7 million deaths

• Deaths from modern pollution risk factors – ambient PM2.5, lead, and chemicals – are on the rise

9 MILLION premature deaths = 16% of all deaths worldwide

The Global Alliance on Health and Pollution 2022
Lancet Commission: POLLUTION IS LARGEST CAUSE OF DEATH GLOBALLY

Global Estimated Deaths by Major Risk Factor or Cause, 2019*

- Interpersonal Violence
- Road Injuries
- AIDS, Tuberculosis, and Malaria
- Drug and Alcohol Use
- Malnutrition (Child and Maternal)
- Smoking and Secondhand Smoking
- Total Pollution
Pollution Trends Over Time

Ambient AIR and CHEMICALS ↑
Household air and water ↓

Modern Versus Traditional Pollution Over Time

Source: GBD study, 2019
Chemical Pollution Severely Undercounted

**POLLUTION**
- **9 million**
  - LEAD (Environmental) **900,000**
  - OCCUPATIONAL **870,000**

**POLLUTION by Type**
- PFAS, EDC, OTHERS
- PESTICIDES
- ASBESTOS
- ARSENIC (often naturally occurring)
- MERCURY

**Premature Deaths from Pollution**
**IHME 2019**
- Malaria **643,000**
- HIV **864,000**
- **CHEMICALS** **1.8 million**
Lead Poisoning is Ubiquitous

- **800 MILLION CHILDREN** have elevated blood-lead levels
- **ONE THIRD** of all children globally
- are estimated to have blood lead levels **exceeding 5 µg/dl**, the level at which WHO recommends intervention.

The Toxic Truth: Children’s Exposure to Lead Pollution Undermines a Generation of Future Potential
Major Sources of Lead Pollution and Chemicals

Not just lead in gasoline

**LEAD ACID BATTERIES**
- Car batteries
- 85 percent of all lead
- Dirty recycling practices contaminate neighborhoods
- 10% annual growth

**SPICES**
- Turmeric, paprika, others in South Asia, Eastern Europe, MENA
- Added for color (lead compounds are vibrant yellows and reds), and weight

**COOKWARE**
- Glazing on artisanal pottery
  Also in aluminum pots

**OTHER SOURCES:** paint, toys, cosmetics, insense

Data: Toxic Truth Report

The Global Alliance on Health and Pollution 2022

May 4, 2022
90% of pollution-related disease falls on low and middle-income countries
Children are exquisitely sensitive

- Greater exposure proportionate to body mass
- 7 times more water per Kg per day;
  Hand-to-mouth activity
- Diminished ability to detoxify many chemicals
- Heightened biological vulnerability—e.g. thalidomide, DES, fetal alcohol syndrome, lead
- More years of future life

Data: Institute for Health Metrics Evaluation (IHME)
Lead (Pb) causes Permanent Brain Damage

In Babies:

Exposure prenatal, or in first year of life:

• Permanent damage to frontal cortex
• Top 100 countries have avg > 5 μg/dL
• Permanent IQ loss—3 to 5 points
• Increase in disability, learning disorders

Other health impacts—later in life:

• heart disease, kidney disease, stroke, premature birth, low birth weight.
Economic costs of Pollution-related Disease

- Lancet: Up to 2% drain on LMICs GDP from loss of productivity
- Over 7% of health care costs in middle income countries

*Lead (Pb) alone* - Each IQ point lost equates to reduced lifetime earnings. 4% GDP for Africa, 2% GDP for Latin America and Asia
Impacts are undercounted—solutions are underfunded

(Modern Pollution - Chemicals/soil and ambient air)

### I. Prioritize

Make addressing pollution a national and international priority

Adopt a One Health approach and policies that protect human, animal and planetary health

### II. Allocate Resources

**Corporate, philanthropic, bilateral and multilateral – role for all**

Allocate green recovery funds to pollution prevention and mitigation

Create programs to address pollution

### III. Science Policy Panel on Chemicals Waste and Pollution

**Great potential Public-Private partnerships:**

Corporate/pollution metrics, including in the supply chain

Specific initiatives (crop burning, batteries, industrial wastewater - ULABs can be truly circular economy

Join GAHP’s Global Lead (Pb) Forum

### IV. Partner

*Help countries prioritize the worst problems (GAHP’s HPAPs)*

*Stop pollution at the source*

*Project children’s health and future potential*

*Produce tangible measurable results (i.e. reduced blood lead levels (BLLs)).*

### V. Implement

Implement projects that:
Thank you

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Please send your questions to info@gahp.net